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November 3, 2010

To:

Maryland Watershed Implementation Plan
Attn: Tom Thornton
Maryland Department of the Environment
1800 Washington Boulevard, Suite 540
Baltimore, Maryland 21230-1718

Draft Chesapeake Bay TMDL
U.S. Environmental Protection Agency
Attn: Docket # EPA-R03-OW-2010-0736

From: Carroll County Government, Maryland

Re: Response to Notice for Public Review of the Draft Total Maximum Daily Load (TMDL) for the Chesapeake Bay and Request for comment Draft Watershed Implementation Plan (WIP) for the State of Maryland

Attachment: Comments on U.S. EPA's Draft Chesapeake Bay TMDL and Maryland's Draft Watershed Implementation Plan: Phase I, Submitted by Carroll County Government

Carroll County has been a strong advocate of water resource management since the 1970s. Local efforts to protect and manage ground and surface water resources has developed into a comprehensive, successful program. The County's commitment to resource protection associated with urban, as well as the agricultural sectors, are among the best in the State of Maryland. Those efforts whether undertaken voluntarily or by regulatory requirement came at a cost. The costs associated with the programs and projects are clearly defined in the operating and capital budgets developed by the various County and municipal agencies. The budget and planning processes at the local level incorporate critical public review, comment, and approval regarding how limited resources will be utilized.

Many presentations by Federal and State officials have referred to the Bay TMDL as a pollution diet, where the maximum amount of a pollutant the Bay can receive is determined while still meeting water quality standards. In many ways, local governments are dealing with a similar diet situation associated with their operations. During limited economic times, the County's fiscal and resources diet determines the extent of requirements, programs, and projects that can be achieved within the constraints of significantly reduced inputs. Local governments are operating very lean, with falling revenue, limited resources, and reduced staffing. The future local "diet" appears to look more questionable than promising.

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While the TMDL and WIP offer admirable, necessary goals, whether or not the capacity to achieve the lofty expectations, especially at the local level, is in place or possible is questionable. The question cannot begin to be answered without cost estimates and specific workload analysis. Both the draft TMDL and WIP were silent in regards to cost estimates. These cost estimates and local government loading reduction expectations need to be included with the TMDL and WIP drafts in order for local jurisdictions to evaluate the level of commitments that can feasibly be made to achieve these goals. Local planning staff, as well as decision makers and the public, need to be aware of the fiscal and resource demands of the drafts.

Given these constraints, the adoption of the TMDL should not occur until a revised WIP (Phase 1 & 2) conveying the cost and loading expectations at the local level are presented. With the expectation, from both EPA and the State of Maryland, that a significant level of effort will need to be accomplished via local governments, serious consideration should be given prior to TMDL adoption as to implementation capacity.

In addition to the issues discussed above, additional specific comments related to the drafts are attached for your consideration.

For questions or clarifications related to these comments, please contact Tom Devilbiss, Deputy Director, Department of Planning, at 410-386-2145 or tdevilbiss@ccg.carr.org.

**Comments on
U.S. EPA's Draft Chesapeake Bay TMDL
and
Maryland's Draft Watershed Implementation Plan: Phase I**

*Submitted by
Carroll County Government, Maryland*

Bigger Picture: Impacts on Local Jurisdictions

- First and foremost, we suggest that **delaying the adoption of the TMDL until the completion of both the Phase 1 and Phase 2 WIPs**. It will be difficult to determine feasibility without allocations for source sectors and to determine what options the local jurisdictions could commit to without cost and feasibility information. The ability of a local jurisdiction to even fund all of the measures should impact the timing or other relevant portions of the TMDL before it is officially adopted.
- Although ultimately it is a shared effort to put particular measures in place to achieve the reductions, it would be essential to be clear on **who is actually legally responsible** for achieving the goals. It will be crucial to incorporate language to the process to exempt local jurisdictions from civil suits, particularly given the uncertainty of where the resources and capacity to implement the WIP are coming from at this point.
- We know that many requirements will be incorporated to the NPDES permits, thereby making the local jurisdictions responsible for that portion of the reductions. However, the responsibility cannot fall solely on the local jurisdictions to ensure that all of the measures are in place by the 2017 and 2010 milestones/target dates just because a certain portion of the load falls within their jurisdictional boundaries. Many of the options for achieving the targets are not within the authority of the local jurisdiction to enable and/or enforce. It should be clear that the **State is committed to implementing** all of the options that are within State authority, not relying on local jurisdictions to achieve it all. This includes **enabling legislation** needed to accomplish much of the WIP (ex. utility tax/fee)
- Text to clarify whether or not the local jurisdictions are expected to **comply with** the State's **accelerated schedule** for getting the measures in place, or if that applies only to the measures the State will put in place. The State committed to having the measures in place by 2017 and 2020 to achieve the reductions, but do the local jurisdictions also have to have their share of the options in place as well, or do local jurisdictions fall under EPA's timeline for these achievements? It would also be useful to local jurisdictions to know if any punitive measures enforced by EPA would only apply to the percentage not achieved beyond EPA's original target dates or to the percentage not achieved based on the State's commitment of 70 percent rather than 60 percent.
- Although very difficult to measure as an option for load reductions, **educational outreach for the public and elected officials** is a vital component of achieving these reductions. Measures to provide effective outreach should be incorporated to the WIP. If these

stakeholders better understand what needs to be done and why, it is more likely that measures will be put in place to achieve the targets.

- The Bay TMDL notice states, "EPA intends to work with federal partners, the six watershed states, the District of Columbia, local governments, and other parties to put in place a comprehensive, transparent, and accountable set of commitments and actions..." It is not clear from either the Bay TMDL documents or the State of Maryland WIP what the **specifics of the commitments and actions** are, especially related to local jurisdictions.

Bigger Picture: Impacts on Planning

- Implementation of the WIPs will necessarily change the land use plans through the **comprehensive planning process**. However, it is not clear how the process will need to be different and how to incorporate the appropriate factors to achieve targeted reductions. Serious consideration needs to be given to the **impact** on the ability of a jurisdiction **to actually focus growth** within designation growth areas with all of these measures in place. The impact on property owners' ability to achieve economically viable use of their land is a key component of the planning process, but also is a key legal consideration.
- **Increasing density** within designated growth areas (sewered) is not an effective strategy for areas already **projected to exceed WWTP caps** without increasing density. Offsets will also not work as an option in these areas. Individual sites could develop buildings that have a smaller footprint and therefore are higher in density. However, the number of units on the site overall could not increase without running into problems with exceeding the WWTP caps. In this situation, minor reductions might therefore be realized through decreased building footprints. However, overall, a growth area will not have greater density, just more open space.
- It will be a challenge to determine how to **reconcile** State and local **goals for agricultural land preservation with** the need to reduce loads from the agricultural sector, particularly as one of the sectors with the highest percentage of **needed reduction**. Some additional description of how the State proposes to address this issue from the *broader planning* perspective would be helpful to incorporate to the document.

Process

- The **review timeframe** and amount of time for the State to adequately incorporate comments are insufficient.

Target Loads

- The text does not indicate if the **transport factor** in the Bay model **accounts for reservoirs** that are located between the stream and the Bay. It would be helpful to clarify.
- There is a need to **define “control strategies”** more clearly up front.

Current Capacity

- The plan suggests the amount of additional capacity that would be needed to fully implement the options and achieve the target loads. However, **no cost information is provided** in the resource assessment. Local jurisdictions will not be able to adequately choose and commit to certain options without cost information and estimates of additional capacity needed in other areas as well. It is also critical to provide local jurisdictions with an estimate of the expected load reductions from each option.
- Pg 2-2, 4th para: Please clarify in the text whether the 2-year milestones represent an **acceleration of current capacity** or just represent an acceleration of the EPA's schedule to get measures in place.
- Pg 207, 6th para: Depending on the number of septic systems to be replaced, upgrading to ENR standards may be cost prohibitive. **Any upgrade to better treatment is a positive.** Monies should be available for upgrades even if not to ENR.
- Pg 2-8, Staffing Capacity: The implementation of septic system upgrades is predominantly administered and managed through the local Health Departments. If an accelerated effort to upgrade septic systems is to be successful, **capacity needs at the local Health Department** level have to be considered. This is again an issue related to local funding capacities and resource allocation.
- Pg 2-13, 1st para: The text refers to changes in the **NPDES Phase II permits**. In addition, a statement is made regarding a funding strategy. Specifics regarding the **changes and funding** mechanisms should be provided as part of the Phase I WIP. This is an example of the critical details which the current draft lacks that are desperately needed by local jurisdictions.

Accounting for Growth

- Offsets for future loads are placed in three categories. The **moderate** per capita load category refers to areas served by state-of-the-art sewage treatment. If **“state-of-the-art” sewage treatment** means ENR, it will be difficult to achieve Smart Growth in these smaller communities without significant funding assistance to upgrade minor systems.
- Pg 3-3, Figure 3.1 & footnote: Figure 3.1 shows that **7.21 lb N/yr is generated per new HH on septic**. The footnote says that 12.16 lbs N/yr is generated per new household on septic. The numbers **do not** appear to **match**. Please provide more description related to the differences between these two numbers to clarify why they are different.

Comments on U.S. EPA's Draft Chesapeake Bay TMDL and Maryland's Draft Watershed Implementation Plan: Phase I, Submitted by Carroll County Government

- Pg 3-5, 2nd para & footnote: At quick reading, this paragraph seems to conflict with the footnote. The text reads that growth on sewer by 2020 is expected to **exceed permitted WWTP capacity** by about **40,000 households**. The footnote indicates that sewer demand would be expected to exceed current permitted WWTP capacity by about **62,000** households. Please explain the difference between these two figures to eliminate the confusion.
- Pg 3-5, 1st para: The text references the need for septic system upgrades, stormwater retrofits, and WWTP upgrades as “must be part of the solution” activities. The text then states “but many will cost more per pound of nitrogen reduced than targeted options.” This appears to be an excellent location for **cost estimates and cost/benefit analysis**. Suggest this section of the **WIP be expanded** to include a specific discussion regarding those items.
- Pg 3-6, bullet 3: One criterion guiding offset strategies is to ensure an **adequate supply of offset generators**. Please explain how an adequate supply will be achieved.
- Pg 3-6, last para: The text appears to suggest that **target loads by sector** might be **increased** so that there is room in the allocation for new growth as well. Please include text clarifying if this is the intent.
- Pg 3-8, 2nd para: To achieve a better picture of actual loads and reductions, **incorporating local land use and septic data** to the Bay model should be an option.
- Pg 3-8, 3rd para: Please clarify if jurisdictions or watersheds that already exceed the caps will still get an **allocation for future growth**.
- Pg 3-8, Bullets: It is not clear from the descriptive text which government **agency** or body will be responsible for **requiring, implementing, tracking, and monitoring** the bulleted items. Please explain and provide details.
- Pg 3-8, Bullets: Please include a note indicating if **offsets** will still be allowed in areas where the **WWTPs exceed their caps**.
- Pg 3-9, 3rd para: Please include a definition of “**targeted areas**” as it relates to septic system nitrogen updates and how these targeted areas are defined.
- Pg 3-9, Sect 3.4: The preliminary **schedule to develop offset policies and procedures** for septs and land development seems to be rather **long** given the 2017 and 2020 target dates and the length of time needed to get these measures in place on the ground.
- Pg 3-10, 2nd para: The text indicates that the BRF was instituted to fully fund the **ENR upgrades to major WWTPs**. If this is a commitment on the State's part and already included in the 2-year milestones, **additional funding** needs to be found or made available to ensure this measure/option can be fully implemented.
- Pg 3-10, 4th para: The text indicates that offsets are expected to primarily come from the agricultural sector. Some consideration should be given to what happens **if the agricultural sector cannot meet its allocations** and where that will be made up. If the agricultural sector does not meet its allocations, information should be included to identify how the offset program would work and how this would impact meeting the total allocation for a watershed.
- Pg 3-10, 2013: It seems a bit optimistic to believe **offset policies**, many of which may require **legislative approval**, can be in place in just two years.

Gap Analysis

- Pg ES-10, 1st para: The text indicates that an **88 percent increase in capacity is needed** to meet the Interim Target for nitrogen. It seems that, in order to determine this number, some background data and information must have been evaluated to identify current capacity and the gap in capacity. Please include the background information in the text of Element 4. It would also be helpful to include the figures from the Executive Summary in the text of Element 4 as well.
- It would be very helpful if the **Bay model is made available to local jurisdictions**. This would help local jurisdictions to monitor and track progress, and make adjustments at the local level. It would also help to customize data at the local level to provide results that are more indicative of progress for that jurisdiction by accounting for practices and capacity not otherwise individualized in the model. Understandably, the local data would need to be shared back at the State level to incorporate into regional and State monitoring.
- Pg 4-1, 1st bullet: It is not clear from the text **how** the **current loads** from the sector were **estimated**. Please explain somewhere if the load estimate accounts for practices already in place in Carroll County that may not be elsewhere across the board.
- Pg 4-1, 2nd bullet: The text references "**current programmatic capacity** to reduce loads." It seems that information on specific policies, staffing, costs, programs, etc. must have been collected and evaluated to determine this capacity. This information should be included so that local jurisdictions understand exactly what is included in the "current capacity."
- Pg 4-1, 3rd bullet: Please describe in more detail **how** the **future growth** was **estimated**, what data was used to do so, and what the baselines and basic assumptions were. If current growth potential is not accounted for, some of the actions that might need to take place to reduce loads cannot be properly credited to the jurisdiction (such as downzoning or TDR).
- Pg 4-1, footnote: The State may desire to steer away from the controversy of being one to set variable reductions between sectors. However, if certain **sectors** clearly have **more or less feasible capacity** for reduction, this should be reflected in the percentages now.
- Pg 4-2, tables: It would be helpful to include some explanation of **why** the numbers are so **different** between the **federal and local data**. It seems that the estimates would be more relevant if local data is used, assuming it is more complete or detailed than the federal data. Please consider how local data may be able to be incorporated to the model in a useful manner that allows a better estimate of local impacts and reductions. As an alternative, the local jurisdictions could work closely with the State to refine the State data. We understand that the model is already very complicated, but the results and estimated reductions do have significant impacts on local jurisdictions and property owners.
- Pg 4-3, 2nd para: If we wait until Phase II or beyond to **refine land use data**, it may not be too late to adjust allocations between sectors, but it will be too late to adjust total reductions needed. Work should take place with the local jurisdictions to refine the land use data **before the Bay TMDL** and total reductions needed are **set**.

- Pg 4-3, 3rd para: The end of this paragraph seems to imply that **converting farmland for development is beneficial** in terms of load reductions. Yet, this is clearly not the goal. If this is not what was meant, please reword to clarify so that it is not misinterpreted.
- Pg 4-3, 6th para: What if, regardless of penalties, the **funds** just are **not there** to put all the measures in place needed to achieve the targets?
- Pg 4-4, 1st para: The figures presented here and in Table 4.2 raise several questions. Incorporating the answers to these questions will help local jurisdictions understand what is already assumed to be done versus what can be counted as a reduction because it wasn't included in the **baseline** data.
 - Does the baseline take into account practices currently in place?
 - Are there actual loads or estimated?
 - If estimated, couldn't the model identify a greater reduction than actually needed by a local jurisdiction if these practices were accounted for?If the loads are actual, the baseline and the reductions should already reflect all practices currently in place, which theoretically would reduce the amount of **reductions needed**. If they are estimates, and all current practices are not accounted for, the additional reductions these practices would represent should be allowed to count toward the needed reductions.
- Pg 4-4, Table 4.2: Please clarify in the text whether the TMDL is set for **delivered** loads or **EOS** or both?
- Pg 4-5, 2nd para: Table 4.4 shows the **percentage reductions needed by source sector**. However, the WIP indicates that reductions will be spread out across the sectors in equal percentages. It seems that equal percentages are not necessarily the most effective way to distribute the allocations. It might be more useful to take the identified percentage reductions needed by sector, and then evaluate the feasibility and capacity of each to make those reductions, and then make some adjustments to reflect feasibilities.
- Pg 4-6, Key Assumptions: The first bullet states that point source loads do not account for the shortfall in **ENR upgrade funding**. However, this is a critical factor in the feasibility of getting these measures in place by 2017.

Commitment & Strategy to Fill Gaps

- The biggest question that remains for each Option/Action is on the **anticipated cost and expected load reductions** of each. This information is needed by local jurisdictions to effectively make decisions on the feasibility of certain commitments expected for the Phase 2 WIP.
- Pg 5-5, Point Sources, Activity 7: **Upgrade of Large Minor WWTPs** – The cost of upgrades to these systems, which can least afford the expense, seems questionable, and the O&M may be beyond the jurisdiction's expertise and budget.
- Pg 5-5, Urban Stormwater, Option 1: This requirement will be an extreme challenge to most jurisdictions. **Retrofit costs** can run up to **\$20,000/impervious acre** restored.
- Pg 5-5, Urban Stormwater, Options 2 & 3: **Not feasible** by any means in the timeframe designated.

Comments on U.S. EPA's Draft Chesapeake Bay TMDL and Maryland's Draft Watershed Implementation Plan: Phase I, Submitted by Carroll County Government

- Pg 5-6, Urban Stormwater, Activity 4: MS4 Phase II – The proposed **20 percent** level may **not** be **achievable** in the timeframe designated. There will be significant cost and resource issues with this item.
- Pg 5-7, Urban Stormwater, Activity 11: Urban Tree Canopy – It is difficult to reason **where** this option would provide any significant **benefit** to reductions in nitrogen loading.
- Pg 5-7, Septics, Activity 3: Septic hookup to ENR plants - The municipalities, which own and operate most of the public WWTPs in Carroll County, have already identified **municipal annexation areas** per the requirements of Article 66B to develop a Municipal Growth Element (MGE). Through the process of developing the MGE, the municipalities have identified areas that are expected to hook up to a public sewer system when the land is annexed to the municipality. Any other systems have either 1) not been planned for service and/or 2) will not be in an area developed densely enough to make the **cost of extending services and hookups feasible**.
- Pg 5-7, Septics, Activity 5: All systems within 1,000 feet of a stream - It would be helpful to **clarify** if this activity refers to **all** (including existing) septic systems **or** just **new** septic systems. This activity would be an extremely **difficult** task to implement and achieve (**legally, technically, and financially**).
- Pg 5-8, Best Farming Practices, Activities 1 & 2: Cover Crops – The program/practice is a critical component of the WIP. Are the options presented **sustainable**? Can the level of acres planted and the funds provided continue in **perpetuity**? Please clarify.
- Pg 5-8, Best Farming Practices, Activity 4: Soil Conservation & Water Quality Plans – How does a plan to do conservation practices generate specific loading reductions? Does this option, and loading reductions assigned, duplicate other practices? It appears many of the agricultural strategies are **assigned reductions multiple times**. Please clarify.
- Pg 5-10, Best Farming Practices, Activity 13: Stream Protection without Fencing – Does this practice truly achieve **nutrient/sediment reductions**? Please clarify.
- Pg 5-18, Air: The draft document indicates that roughly one third of the pollutant loads come from atmospheric deposition. If this is the case, it seems that **more measures should be identified and added to address air quality**. Additionally, if atmospheric deposition represents such a large percentage of the source, are the allocations to other source sectors reduced by the amount of each sector's NPS loads that are generated by air pollution?

Tracking & Reporting

- The text indicates that data is reported through various State agencies and ultimately is filtered to BayStat. **BayStat** is then intended to be able to provide up-to-date data on the progress toward milestones. **Local jurisdictions need to have access** to at least view this data. It would be useful to add some description of how local jurisdictions can access, use, and interpret the data to identify progress on any given segment or sector.
- **MDProperty View** is used for various aspects of tracking new development. However, it has been our experience that the database, and particularly the parcel lines on the tax maps to match a property account, have a **high degree of inaccuracy**. Carroll County

recently completed a project to update and increase the accuracy of its parcel data/layer. Local jurisdictions should have the option to provide their own data to better reflect actual conditions on the ground at the local level.

- Pg 6-16, last para: With two-year milestones and with the 2017 and 2010 timeframes, the **statewide land use layer should be updated much more frequently than every five years**. Given the pace at which measures need to be in place and reductions able to be measured, the land use layer should be updated annually or on an ongoing basis. Local data should be incorporated as much as possible to reflect as many practices as possible that contribute to reductions.
- Pg 6-17, 1st para: The text indicates that local zoning is incorporated to the MDP Growth Simulation Model. It states that longer-term change adjustment is needed. Agreed. The WIP should include options to **refine the growth model** (as well as the Bay model) to more closely reflect on-the-ground conditions. Likely, this will result in many more land use categories, and therefore more impervious cover rates, loading rates, etc. However, this further refinement would be better able to capture changes in loading resulting for various land uses and BMPs. These adjustments would be able to credit local land use and programs to a great extent if these adjustments are also **coordinated with local jurisdictions**.
- Pg 6-17, 1st para: The growth model incorporates **increases in septic tanks**. This information must come from the local Health Department. It would be very helpful if the **data** was also made **available to the local jurisdiction**. As the septic tank regulation is a State function, the local jurisdictions and the State need to coordinate data for the monitoring of progress on the Bay and local TMDLs.
- Pg 6-17, 2nd para: The intent to collect more timely data on new development from local jurisdictions (through the **annual report**) will help keep data current and reflect local conditions. However, local jurisdictions would benefit greatly from detailed yet flexible guidance that spells out the kind of data that should be included. **Guidance should be provided to jurisdictions** in a timely manner so it can be incorporated in a reasonable timeframe.
- Pg 6-18, 1st para: A **common reporting system** to report implementation measures will help provide consistent data. We request, however, that the **local jurisdictions** be **involved** in developing this reporting system so it can be incorporate data types and levels available at the local level. Access by locals to input the data will be more effective and efficient, but the data requested must be data that is actually available.
- Pg 6-19, flow chart: The chart does not include **MDP** and how the **Growth Simulation Model** fits in.

Contingencies for Slow or Incomplete Implementation

- It is critical that local jurisdictions be notified as to the State's response to this item. Therefore, prior to submittal to EPA, the State should provide local governments with text for this section.
- The direction that the EPA and the State will take on this item is crucial information to decision-making in terms of commitments.

Appendices

- The text provides a discussion on the WIP Phase II effort. Specific discussion is needed regarding the sub-allocation process by geographic area and sector. While no specific numbers are provided, the methodology to derive numbers is presented. The approach by the State seems reasonable and fair. Even if the load allocation was calculated equitably, reductions may not be able to be achieved as such, which will continue to be a significant issue for implementation.